ENGLISH

TOTAL SOLUTIONS™

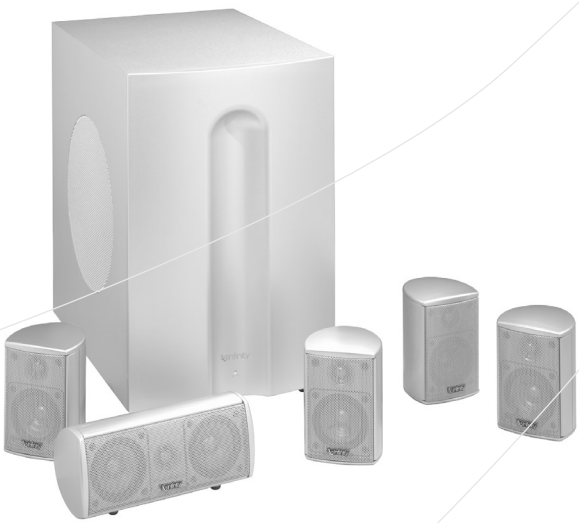
Infinity®

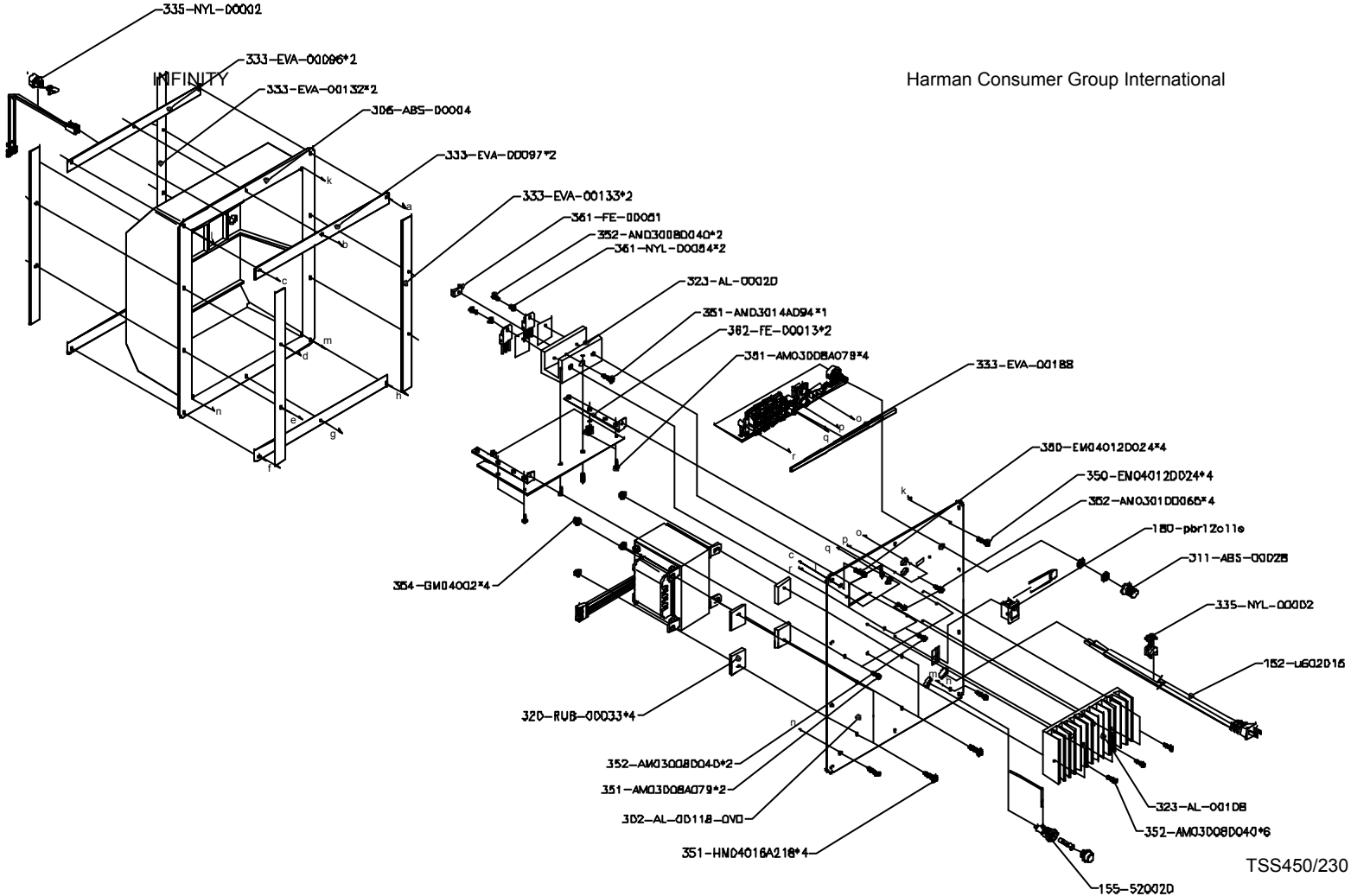
TOTAL SPEAKER SOLUTIONS

TSS-450

SERVICE MANUAL

(230V)

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361-NYL-00054*2
323-AL-00020
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361-AM03008A079*4
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352-AM03010D065*4
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354-EM04002*4
320-RUB-00033*4
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302-AL-00118-0V0
351-HN04016A218*4
323-AL-00108
352-AM03008D040*6
155-52002D

TSS450/230

Introduction

Infinity Total Solutions

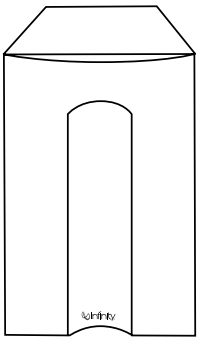
Infinity Total Solutions continues Infinity's longstanding commitment to accurate sound reproduction. Our high-quality drivers, precision dividing networks and rigid, well-braced enclosures combine to deliver uncompromised performance in any multichannel home theater system.
In addition, these speakers, except for the powered subwoofer, are magnetically shielded for safe placement adjacent to a television.

Unpacking the System

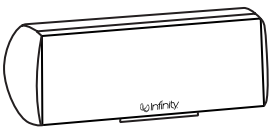
Carefully unpack the system. If you suspect damage from transit, report it immediately to your dealer and/or delivery service. Keep the shipping carton and packing materials for future use. Open the package and verify the following contents:

- Warranty statement
- Wire package

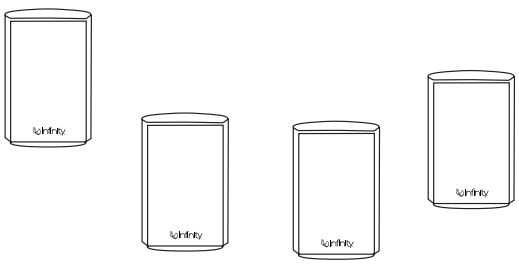
  Contains:
  2 x 12m (2 x 40') Speaker wire
  3 x 6m (3 x 15') Speaker wire
  1 x 4.5m (1 x 15') Subwoofer cable



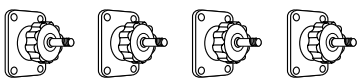
(1) Subwoofer



(1) Center with base



(4) Satellite speakers



(4) Wall brackets for satellites

Planning Your System

Before deciding where to best place your speakers, survey your room and study Figures 1 and 2.

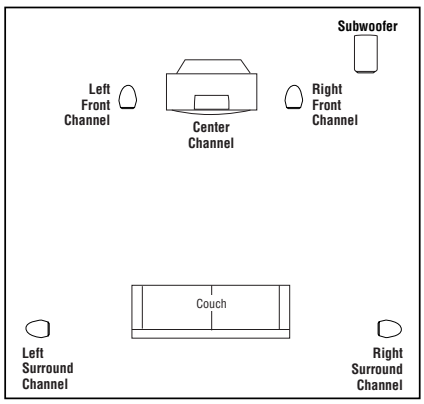


Figure 1. In this overhead view of a typical installation, satellite speakers are used to reproduce sound for the front and surround channels. The center channel reproduces sound and dialogue. The powered subwoofer provides bass for effects and music.

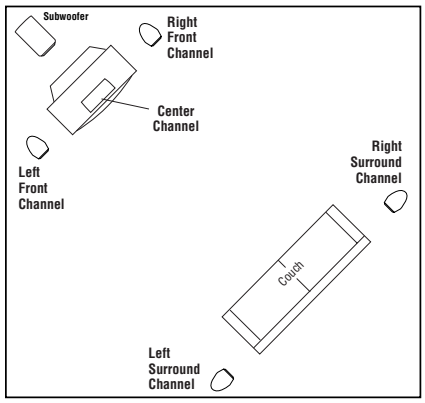


Figure 2. This figure shows an alternative layout, which may be more suitable for some rooms.

Placement

NOTE: The satellite speakers can be placed directly on a shelf, or mounted on a wall using the wall brackets included.

Left and Right Front Channels

For left and right front channels, place one satellite to the left and another to the right of the television, as shown in Figure 1.
Since the speakers are magnetically shielded, you can place them very close to the TV without worrying about the magnetic field distorting the picture.

Center Channel

For the center channel, place the speaker directly on top of, or below, your television. Use a shelf if the television does not provide a stable platform.
The center channel includes an adjustable rear foot. Simply turn the foot to extend the length. This will allow you, if necessary, to aim the speaker downward slightly, toward the listening area.

Surround Channels

For left and right surround channels, place one speaker on the left and another on the right, to the side of or slightly behind the listening area. The surround speakers should be mounted at a height of between 1.2 and 2 meters.

Subwoofer

Since the installation of a subwoofer can be somewhat more complicated than installing full-range speakers, it is essential that you read this section very carefully prior to connecting the subwoofer to your system. Should you have questions relating to installation, it is advisable to call either your dealer or Infinity's Customer Service Department for advice.

The performance of the subwoofer is directly related to its placement in the listening room and how you align the subwoofer with the satellite speakers. Setting the volume of the subwoofer in relation to the left and right speakers is also of critical importance because it is essential that the subwoofer integrate smoothly with the entire system. Setting the subwoofer's volume level too high will result in an overpowering, boomy bass. Setting the volume level too low will negate the benefits of the subwoofer.

Here are several additional facts on installation that may prove useful. It is generally believed that low frequencies (below 125Hz) are nondirectional and, therefore, placement of a subwoofer within any listening room is not critical. While in theory it is true that the larger wavelengths of extremely low frequencies are basically nondirectional, the fact is that, when installing a subwoofer within the limited confines of a room, reflections, standing waves and absorptions generated within the room will strongly influence the performance of any subwoofer system. As a result, specific location of the subwoofer becomes important, and we strongly recommend that you experiment with placement before choosing a final location. Placement will depend upon your room (for example, whether or not your room permits placement of the subwoofer near either satellite) and the amount and quality of bass required.

Wall-Mounting the Satellites

The TSS-450 satellites are designed to be mounted on the wall. There is a wall bracket for each satellite speaker.
Each speaker bracket will require (4) 1-1/2," #10 wood screws; each screw should be fastened to a wall stud. If a wall stud is unavailable, install an anchor appropriate for a 1-1/2," #10 screw.

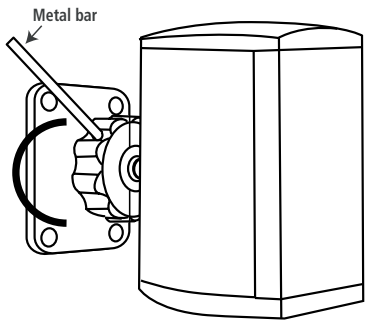
NOTE: The customer is responsible for the correct selection and use of mounting hardware (available through hardware stores) that will ensure the proper and safe wall-mounting of the speakers.

Step 1.
Mark the positions on the wall where you would like to place the mounting screws.

Step 2.
Place bracket against wall and fasten four 1-1/2," #10 wood screws through the bracket's screw holes into the wall. If a wall stud is not available, use an appropriate anchor.

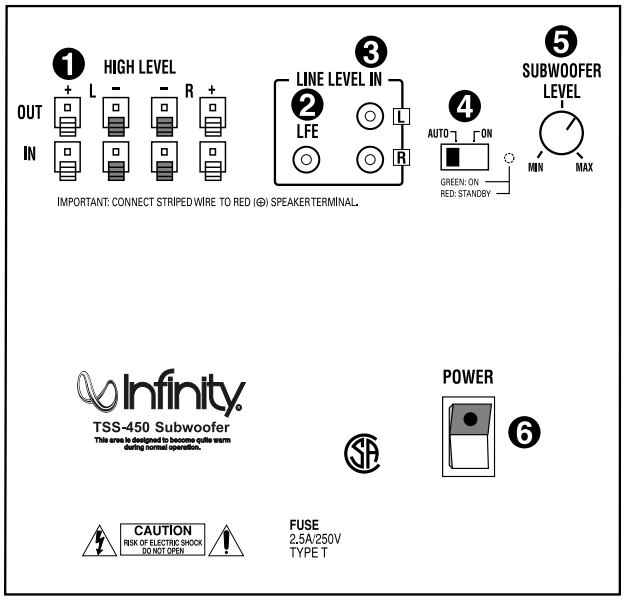
Step 3.
Screw the post of the bracket into the 1/4"-20 threaded insert on the back of the satellite. Adjust the satellite to the desired angle and tighten the knob using the enclosed metal bar.

Figure 3.



Bracket on wall.

Rear Panel



1. HIGH Level Inputs
2. LFE Input
3. Line-Level Inputs
4. AUTO/ON Switch
5. Subwoofer Level Control
6. Power Switch

A Few Suggestions

We recommend that you do not operate your speakers or subwoofer with the bass, treble and loudness controls set to full boost. This will place undue strain on your electronics and speakers and could damage them.

The volume control setting on your processor/preamp or receiver is not a specific indication of the overall loudness level of the speakers. The only important consideration is the loudness level at which the system can be played, regardless of where the volume control is set.

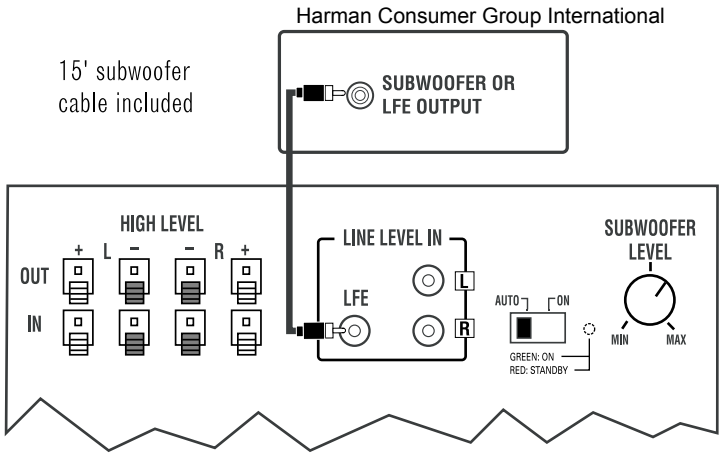
Always turn down the volume control setting on your processor/preamp or receiver when changing a cassette or CD, or switching inputs to AM or FM operation. Excessively loud transients (clicks or popping sounds) can damage the satellite speakers and possibly the subwoofer.

Important!

Whenever changing cables, pulling plugs, etc., ALWAYS TURN OFF ALL EQUIPMENT, including the subwoofer.

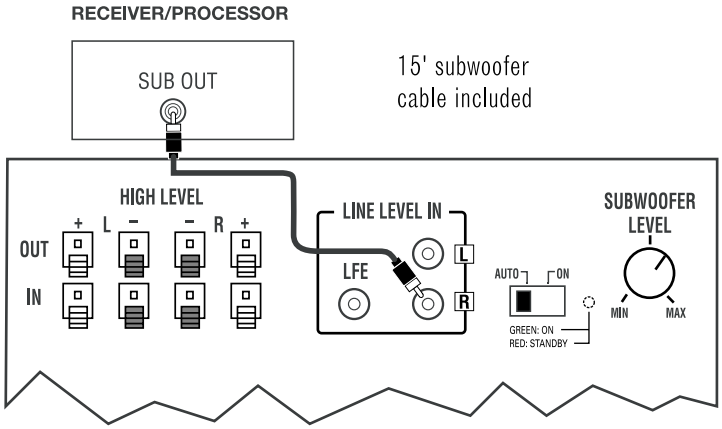
INFINITY SUBWOOFER CONNECTIONS

If you have a Dolby* Digital or DTS® receiver/ processor with a low-frequency-effects (LFE) or subwoofer output:



Set NORMAL/LFE switch to "LFE."

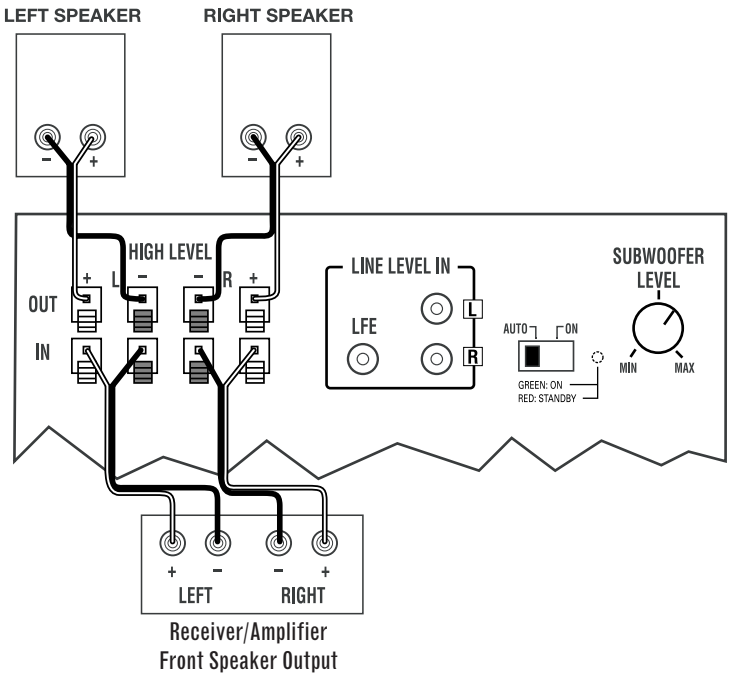
If your receiver/processor does not contain a Dolby Digital or DTS processor but has a subwoofer output:



Set NORMAL/LFE switch to "NORMAL."

NOTE: If your receiver/processor has only one sub out, you may use either the L or R input.

If your receiver/processor does not have subwoofer outputs for the left and right channels or an LFE output:



Receiver/Amplifier Front Speaker Output

Surround Modes

When using the TSS-450 in a Dolby* Digital or DTS home theater system, make sure all speakers are set to "Small" .When using the system in a Dolby Pro Logic* home theater system, make sure the receiver's center channel mode is set to "Normal."

Some Dolby Digital-equipped receivers/processors offer different setup options for each source or surround mode, e.g., CD-stereo, videotape, Dolby, Pro Logic. In each case, follow your equipment's instructions to ensure that the subwoofer output is turned on and that the speakers are set to "Small" in each mode.

If your receiver has adjustable crossover settings, we recommend the subwoofer crossover be set between 100Hz – 120Hz.

Power On

Plug your subwoofer's AC cord into a wall outlet. Do not use the outlets on the back of the receiver.

Initially set the Subwoofer Level Control ❺ to the "MIN" position.

Turn on the subwoofer by pressing the Power Switch ❻ on the rear panel.

Turn on your entire audio system and start a CD or movie sound-track at a moderate level.

Auto On/Stand-By

With the Power Switch ❻ in the AUTO position, the LED on the rear panel will remain lit in red or green to indicate the On/Stand-By mode of the subwoofer.

RED = STAND-BY (No signal detected, Amp Off)

GREEN = ON (Signal detected, Amp On)

The subwoofer will automatically enter the Stand-By mode after approximately 10 minutes when no signal is detected from your system. The subwoofer will then power ON instantly when a signal is detected. During periods of normal use, the Power Switch ❻ can be left on. You may turn off the Power Switch ❻ for extended periods of nonoperation, e.g., when you are away on vacation.

Adjust Level

Turn the Subwoofer Level Control ❺ up about half way. If no sound emanates from the subwoofer, check the AC-line cord and input cables. Are the connectors on the cables making proper contact? Is the AC plug connected to a "live" receptacle? Has the Power Switch ❻ been pressed to the "On" position? Once you have confirmed that the subwoofer is active, proceed by playing a CD or DVD. Use a selection that has ample bass information.

Set the overall volume control of the receiver/processor to a comfortable level. Adjust the Subwoofer Level Control ❺ until you obtain a pleasing blend of bass. Bass response should not overpower the room but rather be adjusted so there is a harmonious blend across the entire musical range. Many users have a tendency to set the subwoofer volume too loud, adhering to the belief that a subwoofer is there to produce lots of bass. This is not entirely true. A subwoofer is there to enhance bass, extending the response of the entire system so the bass can be felt as well as heard. However, overall balance must be maintained or the music will not sound natural. An experienced listener will set the volume of the subwoofer so its impact on bass response is always there but never obtrusive.

Final Positioning

After correctly connecting the TSS-450 system and verifying that both the subwoofer and all satellite speakers are playing, it is time to optimize the system for your particular listening room. Earlier, you placed the subwoofer in its general location. Finding the exact location for optimum performance sometimes only involves moving the speakers up to a few centimeters in any direction. We urge you, therefore, to experiment with placement, if possible, until your speakers deliver their full potential.

MAINTENANCE AND SERVICE

The satellite and subwoofer enclosures may be cleaned using a soft cloth to remove fingerprints or to wipe off dust.

All wiring connections should be inspected and cleaned or remade periodically. The frequency of maintenance depends on the metals involved in the connections, atmospheric conditions, and other factors, but once per year is the minimum.

If a problem occurs, make sure that all connections are properly made and clean. If a problem exists in one loudspeaker, reverse the connection wires to the left and right system. If the problem remains in the same speaker, then the fault is with the loud-speaker. If the problem appears in the opposite speaker, the cause is in another component or cable. In the event that your TSS-450 ever needs service, contact your local Infinity dealer or Infinity directly at www.infinitysystems.com for a service center near you.

SPECIFICATIONS

TSS-450

	Satellites	Center Channel
Frequency Range:	150Hz – 20,000Hz (±3dB)	150Hz – 20,000Hz (±3dB)
Recommended Amplifier Power Range:	10 – 100 watts	10 – 125 watts
Sensitivity: (2.83V @ 1 meter)	88dB	89dB
Nominal Impedance:	8Ω	8Ω
Crossover Frequency:	7000Hz	7000Hz
Midrange Driver(s):	63mm (2-1/2") MMD, magnetically shielded	Dual 63mm (2-1/2") MMD, magnetically shielded
High-Frequency Driver:	13mm (1/2") MMD, magnetically shielded	13mm (1/2") MMD, magnetically shielded
Dimensions (H x W x D):	127mm x 88mm x 88mm (5" x 3-1/2" x 3-1/2")	88mm x 203mm x 88mm (3-1/2" x 8" x 3-1/2")
Weight:	0.5kg (1.2 lb)	0.9kg (1.9 lb)

	Powered Subwoofer
Frequency Range:	39Hz – 150Hz (±3dB)
Amplifier Output:	100 watts RMS
Low-Frequency Driver:	200mm (8") MMD
Crossover Frequency:	120Hz, 24dB/octave (LFE/Normal switch in Normal position)
Dimensions (H x W x D):	413mm x 262mm x 394mm (16-1/4" x 10-1/4" x 15-1/4")
Weight:	12.9kg (28.3 lb)

Infinity continually strives to update and improve existing products, as well as create new ones. The specifications and construction details in this and related Infinity publications are therefore subject to change without notice.

Model name: TSS-450PLT/230 (INFINITY PLATINUM HOME CINEMA)

No.	Part number	Description	Q'ty
01	TSS-450PLT/230CA	4PCS/SAT+1PCS*CENTER	1PC
02	TSS-450PLT/230SUB	8" 4 OHM WOOFER+AMP BOX	1PC
03	406-000-05092	O/M TSS-450PLT/230&TSS-450CHR/230	1PC
04	402-000-01816	Gift box TSS-450(230V)SYSTEMPLATINUM	1PC
05	413-000-00670	label made in TSS-450 CHR;PLT	1PC

Model name: TSS-450PLT/230 CA

No.	Part number	Description	Q'ty
01	TSS-450PLT/230SAT	2" WOOFER+TW 4 OHM BOX.	4PCS
02	TSS-450PLT/230CEN	2*2"WOOFER+TW 4 OHM BOX	1PC
03	431-000-01039	EPS Polyform TSS-450CHR/CA;PLT/CA	1PC
04	370-000-00276G	PE+PVC+CU wire bag40□AWG#18-30□	2PCS
05	370-000-00277G	PE+PVC+CU wire bag 20AWG#18-30□	3PCS
06	370-000-00273	PE+PVC+CU wire bag 1PCS RCA	1PC
07	398-ABS-00303S	ABS ball bracket Sφ15*43 silver	4PCS
08	399-FE-00630	FE iron barφ4.5mm*100mm BLACK	1PC
09	398-ABS-00317-0LA	ABS plastic assemble 65*35.5H silver	1PC
10	400-000-04714	master cartonTSS-450CHR/CA;PLT/CA	1PC

Model name: TSS-450PLT/230 SAT

No.	Part number	Description	Q'ty
01	306-ABS-00719S	ABS back cover plastic116.5*88*70.3H silver	1PC
02	303-ABS-00172S	ABS top cover 88*88*11.8T silver	1PC
03	304-ABS-00177S	ABS bottom 88*88*16.5T silver	1PC
04	215-000-00547	terminal	1PC
05	22PF48JA-DW07	2" 19MM 4OHM(1.9+1.3)OZ	1PC
06	013-7500-00794	X-over INFINITY TSS-450 SAT	1PC
07	11DM13NG-DT01	13MM DOME TWEETER 4OHM	1PC
08	328-SPG-00028	Absortion material white 76*76*20T	1PC
09	213-020-00516W	ABS plastic 68*68*2.95T	1PC
10	352-BM04018D621	FE screw T4*18	6PCS
11	320-RUB-00053	Rubber foot 11φ	3PCS
12	329-020-00735S	FE iron grille 113.5*74*12.5T silver	1PC
13	410-000-02687	PAP model label TSS-450PLT SAT	1PC
14	423-000-00364	PE bag TSS-SAT450CHR;PLT	1PC
15	411-000-01703	PAT serial label TSS450-PLT/230 SAT	1PC
16	352-AM03008D035	screw 3*8	2PCS
17	316-ABS-00547	ABS logo 26.38*6.1	1PC
18	375-000-00016	Black glue to iron grille 2.0*5mm	4PCS

Model name: TSS-450PLT/230 CEN

No.	Part number	Description	Q'ty
01	306-ABS-00720S	ABS back cover 190*88*70.3H silver	1PC
02	303-ABS-00179S	ABS top cover 88*88*11.8T silver	2PCS
03	215-000-00547	screw	1PC
04	22PF48JA-HW05	2" 19MM 8OHM (1.9+1.3)OZ	2PCS
05	19DM13NG-DT01	13MM DOME TWEETER 4OHM	1PC
06	013-7500-00793	x-over INFINITY TSS-450 CENTER	1PC
07	328-SPG-00028	Absortion material white 76*76*20T	1PC
08	213-020-00516W	ABS glue ring 68*68*2.95T	2PCS
09	352-BM04018D621	FE screwT4*18	8PCS
10	320-RUB-00053	rubber foot 11φ	2PCS
11	351-GM04025A466	screw bracket black M4*22 RUBBER HEAD	1PC
12	329-020-00734S	FE iron grille187*74*12.3T silver	1PC
13	410-000-02689	PAP model label TSS-450PLT CEN	1PC
14	423-000-00365	PE bag TSS-450PLT CEN;CHR CEN	1PC
15	411-000-01705	PAP serial label TSS450-PLT/230 CEN	1PC
16	352-AM03008D035	screw 3*8	2PCS
17	316-ABS-00547	ABS logo 26.38*6.1	1PC
18	375-000-00016	black glue to iron grille 2.0*5mm	4PCS

Model name: TSS-450PLT/230 SUB

No.	Part number	Description	Q'ty
01	241-080-00601S	WOD+ABS cabinet+ silver front baffle+LED+port+al	1PC
02	010-7510-00370	Amp INFINITY 100W TSS-450PLT 230V	1PC
03	20MF10DAG-DW01	8" 35MM 4OHM (17+12)OZ	1PC
04	329-080-00736S	FE iron grille φ215*18H silver	1PC
05	352-AM04020D210	screw t4*20	10PCS
06	320-RUB-00199	RUB Rubber foot 2.5T φ7 70degree	4PCS
07	320-ABS-00195	ABS foot support φ26*19.97	4PCS
08	352-CM04025D604	FE screw T4*25	4PCS
09	423-000-00366	PE bag TSS-450CHR SUB;PLT SUB	1PC
10	411-000-01704	PAP serial labelTSS450-PLT/230 SUB	1PC
11	431-000-01026	EPE polyform TSS-450CHR SUB;PLTSUB	1PC
12	352-FM04020D605	FE screw T4*20	8PCS
13	423-000-00007	plastic bag 8"*9"*0.02t	1PC
14	411-000-05318	PAP TSS-450PLT/230 SUB silver	1PC

Model name: **010-7510-00370 (AMP INFINITY 100W TSS-450PLT/230)**

No.	Part number	Description	Referance	Q'ty
01	051-A00368A	PCB ASS'Y OF TSS-450		1PC
02	351-AM03008A079	Screw M3*8 black		6PCS
03	351-BM03012A088	Screw M3*12		1PC
04	351-HM04016A218	Screw M4*16 black		4PCS
05	354-GM04002	Screw with screw plate M4		4PCS
06	352-AM03008D040	Screw ☐3*8 type B black		8PCS
07	352-AM03010D065	Screw ☐3*10 type P black		4PCS
08	350-EM04012D024	Screw 4☐*12 black		4PCS
09	150-e8604106	Transformer EI-86 230V/50Hz		1PC
10	152-v602026	Power code SP-021A 6FT VDE		1PC
11	154-v12506t0	Fuse TSD 1.25A 250V VDE		1PC
12	155-520020	Fuse holder R3-11		1PC
13	162-10082007	Wire red 18AWG 80mm		1PC
14	162-a040d001	Speaker wire #1015 400mm		1PC
15	163-11009	Transparent bind-up wire 100mm		2PCS
16	176-wjce1	Closing terminal CE-1		1PC
17	180-pbr12c11s	Power switch PUSH BR12C11S		1PC
18	193-2m1813	Piezo TO-220 18*13mm		2PCS
19	302-AL-00226-0VE	Alu. panel 215*270*2.5t		1PC
20	361-FE-00004	IC HOLDER 26.9*12*1.4T		1PC
21	323-AL-00108	HEAT SINK 117.5*60*25		1PC
22	311-ABS-00028	Plastic knob 46077-W P.V.C.		1PC
23	306-ABS-00714	Plastic rear cover 268*213*102		1PC
24	335-NYL-00002	Power wire fastening 4K-4 NO-BB		2PCS
25	333-EVA-00096	EVA caution 213*15*2.0mm		2PCS
26	333-EVA-00097	EVA caution 213*15*1.0t		2PCS
27	333-EVA-00132	EVA caution 238*15*2.0mm		2PCS
28	333-EVA-00133	EVA caution 238*15*1.0t		2PCS
29	333-EVA-00220	EVA caution 225*15*1t UL		1PC
30	320-RUB-00033	Rubber sheet 25*21*4t		4PCS
31	362-FE-00013	PCB holder L TYPE t=1.6mmS.P.C.C		2PCS
32	333-EVA-00188	EVA caution 170x5x1t		1PC
33	413-000-00188	Speaker lable 4 OHM 45*8mm		1PC
34	413-000-00540	Label of MADE IN CHINA		1PC

Model name: 051-A00368A PCB ASS'Y OF TSS-450

No.	Part number	Description	Referance	Q'ty
01	052-A00368A	AI PCB ASS'Y OF TSS-450		1PC
04	110-10821jk2	Resistor 820Ω 1W ±5%		1PC
05	110-122r2j15	Resistor 2.2Ω 1/2W ±5%	R127	1PC
06	113-500r1j10	Resistor 0.1Ω 5W ±5%	R121,122	2PCS
07	114-03302m0	Resistor 3K 0.3W ±20%	R138	1PC
08	115-h503a101	Resistor D16 50K/1 A	VR201	1PC
09	135-4478m35	Capacitor 4700uF 35V ±20%	C121,122	2PCS
10	135-4478m50	Capacitor 4700uF 50V ±20%	C133,134	2PCS
12	162-10202001	Wire 26AWG 1007 200mm RED		1PC
13	162-50332003	2PIN 330mm RED	D209	1PC
14	171-udhss124d	Relay 5A 24V UDH-SS124D	RY101	1PC
15	174-0rcb202v	RCA JACK RCB-202V	JK202	1PC
16	174-0rca108nb	RCA JACK RCA108NB 1P		1PC
17	174-2rsp108v	8 PIN speaker terminal RSP-108V	JK201	1PC
18	175-1c07v01	Connector 7PIN PITCH=2.5mm	P101	1PC
19	175-1d02v01	Connector 2PIN PITCH=3.96mm	P102	1PC
20	175-1d05v01	Connector 5PIN 3.96mm	P103	1PC
21	180-tms7210v	SWITCH SLIDE 6PIN MS7210V	SW201	1PC
22	190-06m4558d	I.C. OPA 4558D	U101,203	2PCS
23	190-16tl074cn	I.C TL074CN ST	U201,202	2PCS
24	192-027c1815gr	Transistor 2SC1815GR TAP	Q101,115	2PCS
25	192-991d669a	Transistor HI-SINCERITY HSD669A	Q106	1PC
26	192-021tip35c	Transistor TIP35C	Q107	1PC
27	192-992b649t	Transistor HSB649T	Q105	1PC
28	192-022tip36c	Transistor TIP36C	Q108	1PC
29	192-161tip41c	Transistor TIP41C NPN SGS	Q124	1PC
30	192-162tip42c	Transistor TIP42C PNP SGS	Q120	1PC
31	192-201d882y	Transistor KSD882Y	Q117	1PC
32	192-202b772y	Transistor KSB772Y	Q119	1PC
33	193-3m2520	Piezo TO-3P 25x20mm	Q107,108	2PCS
34	197-00kbl405	Bridge recitifier 4A 500V KBL405	D110,115	2PCS
35	197-101n4002	Diode 1N4002	D104	1PC
36	197-101n5402	Diode 1N5402	D111,112	1PC
37	361-FE-00051	Transistor holder 14.2*8.0*5.2t=1.6mm		1PC
39	361-NYL-00054	Diode insulated sheet (SW06002)		2PCS
40	051-A00014B	PCB ASS'Y OF SCS135 LIMITER		1PC

Model name: 052-A00368A AI PCB ASS'Y OF TSS-450

No.	Part number	Description	Referance	Q'ty
02	110-14122j26	Resistor 1.2K 1/4W ±5% CF	R265	1PC
03	110-14472j26	Resistor 4.7K 1/4W ±5% CF 26mmTAP	R201,202	2PCS
04	110-14560j26	Resistor 56Ω 1/4W ±5% CF 26mmTAP	R117	1PC
05	110-16101j26	Resistor 100Ω 1/6W ±5% CF 26mmTAP	R120,213,214,215	4PCS
06	110-16102j26	Resistor 1K 1/6W ±5% CF 26mm TAP	R124,166,254,264	4PCS
07	110-16103j26	Resistor 10K 1/6W ±5% CF 26mm TAP	R133,134,209,212,216	18PCS
08	110-16104j26	Resistor 100K 1/6W ±5% CF 26mmTAP	R163,164,231	3PCS
09	110-16105j26	Resistor 1M 1/6W ±5% CF 26mm TAP	R143,259	2PCS
10	110-16123j26	Resistor 12K 1/6W ±5% CF 26mm TAP	R135,139,165	3PCS
11	110-16124j26	Resistor 120K 1/6W ±5% CF 26mmTAP	R233	1PC
12	110-16151j26	Resistor 150Ω 1/6W ±5% CF 26mmTAP	R253	1PC
13	110-16152j26	Resistor 1.5K 1/6W ±5% CF 26mmTAP	R103,123,136,137,141	7PCS
14	110-16153j26	Resistor 15K 1/6W ±5% CF 26mm TAP	R118,145,152,154,234	5PCS
15	110-16154j26	Resistor 150K 1/6W ±5% CF 26mmTAP	R131,252	2PCS
16	110-16181j26	Resistor 180Ω 1/6W ±5% CF 26mmTAP	R111,114	2PCS
17	110-16183j26	Resistor 18K 1/6W ±5% CF 26mm TAP	R227	1PC
18	110-16223j26	Resistor 22K 1/6W ±5% CF 26mmTAP	R128,129,155,156,158	12PCS
19	110-16273j26	Resistor 27K 1/6W ±5% CF 26mmTAP	R223	1PC
20	110-16205j26	Resistor 2M 1/6W ±5% CF 26mm TAP	R257	1PC
21	110-16332j26	Resistor 3.3K 1/6W ±5% CF 26mmTAP	R106,107,144,236,258	5PCS
22	110-16392j26	Resistor 3.9K 1/6W ±5% CF 26mmTAP	R105,108	2PCS
23	110-16393j26	Resistor 39K 1/6W ±5% CF 26mm TAP	R126	1PC
24	110-16470j26	Resistor 47Ω 1/6W ±5% CF 26mmTAP	R112,113,115,116	4PCS
25	110-16471j26	Resistor 470Ω 1/6W ±5% CF 26mmTAP	R140,161,162	3PCS
26	110-16472j26	Resistor 4.7K 1/6W ±5% CF 26mmTAP	R110,125,130,147,150	9PCS
27	110-16473j26	Resistor 47K 1/6W ±5% CF 26mm TAP	R101,219,249,250,251	5PCS
28	110-16512j26	Resistor 5.1K 1/6W ±5% CF 26mmTAP	R210,221	2PCS
29	110-16513j26	Resistor 51K 1/6W ±5% CF 26mm TAP	R224	1PC
30	110-16563j26	Resistor 56K 1/6W ±5% CF 26mm TAP	R104	1PC
31	110-16681j26	Resistor 680Ω 1/6W ±5% CF 26mmTAP	R148,151	2PCS
32	110-16682j26	Resistor 6.8K 1/6W ±5% CF 26mmTAP	R109	1PC
33	110-16913j26	Resistor 91K 1/6W ±5% CF 26mm TAP	R203-206	4PCS
34	130-sl101k503	Capacitor 100P 50V SL ±10% TAP	C139,140,207,214,220	5PCS
35	130-2b102k503	Capacitor 1000P 50V ±10% TAP	C116,141,203	3PCS
36	130-2b221k503	Capacitor 220P 50V ±10% TAP	C204,205,210,211,212	6PCS
37	130-2b681k503	Capacitor 680P 50V ±10% TAP	C208	1PC
38	130-3f104z503	Capacitor 0.1U 50V +80/-20% TAP	C108,113,115,119,137	13PCS
39	130-3f473m503	Capacitor 0.047U 50V ±20% TAP	C106,209	2PCS
40	130-sl470k503	Capacitor 47P 50V ±10% TAP	C229	1PC
41	32-103j503	Capacitor 0.01U 50V ±5% TAP	C223,224	2PCS

Model name: 052-A00368A AI PCB ASS'Y OF TSS-450

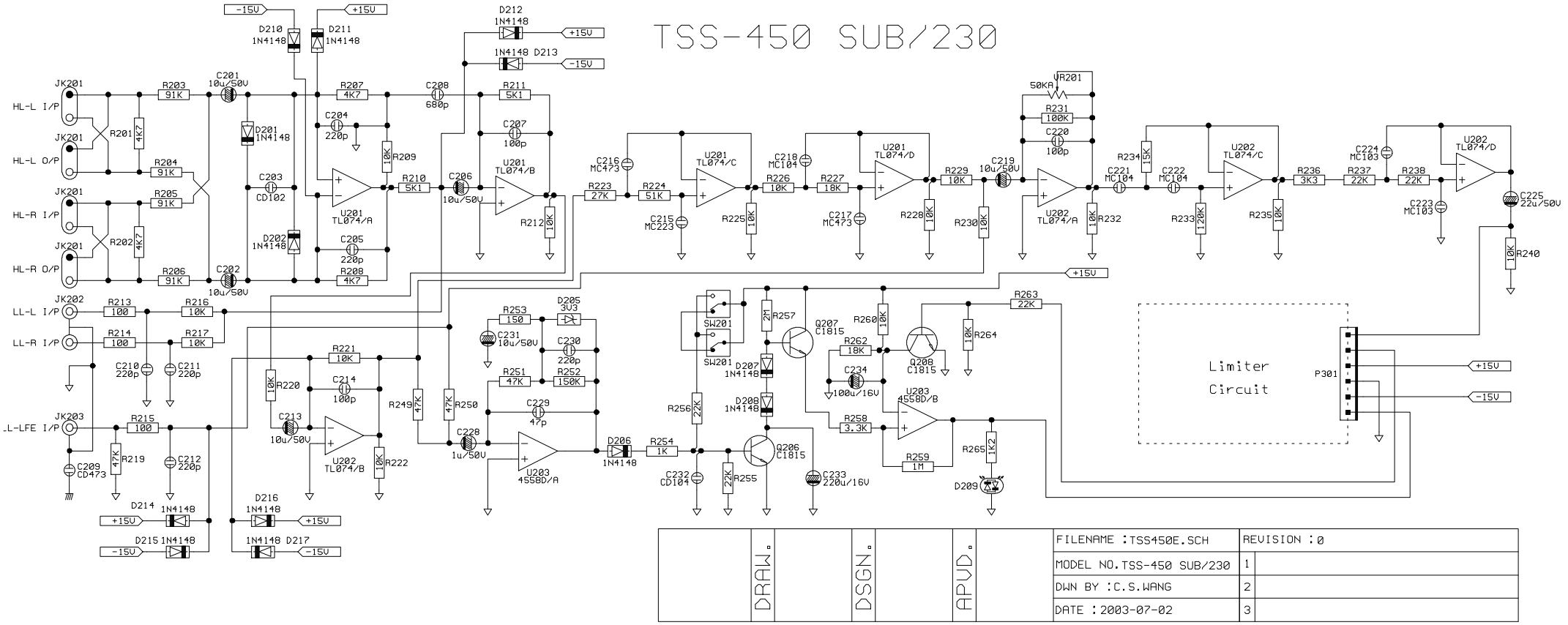
No.	Part number	Description	Referance	Q'ty
42	132-104j503	Capacitor 0.1U 50V ±5% TAP	C107,218,221,222	4PCS
43	132-223ja03	Capacitor 0.022uF 100V ±5% TAP	C123-128,131,132,21	9PCS
44	132-473j503	Capacitor 0.047U 50V ±5% TAP	C216,217	2PCS
45	135-3105m50	Capacitor1U 50V ±20% TAP	C105,112,228	3PCS
46	135-3106m50	Capacitor10uF 50V ±20% TAP	C201,202,206,213,21	6PCS
47	135-3107m16	Capacitor100uF 16V ±20% TAP	C109,110,117,120,23	7PCS
48	135-3107m50	Capacitor100U 50V ±20% TAP	C135,136	2PCS
49	135-3226m50	Capacitor 22U 50V ±20% TAP	C114,118,225	3PCS
50	135-3227m10	Capacitor220U 10V ±20% TAP	C129,130,	2PCS
51	135-3227m16	Capacitor 220U 16V ±20% TAP	C111,233	2PCS
52	135-3476m25	Capacitor 47U 25V ±20% TAP	C103	1PC
53	192-027c1815gr	Transistor 2SC1815GR TAP	Q102,111,112,113,11	10PCS
54	192-027c2235y	Transistor 2SC2235Y TAP	Q121	1PC
55	192-028a1015gr	Transistor 2SA1015GR TAP	Q114,116,122,127	4PCS
56	192-028a965y	Transistor 2SA965Y TAP	Q125	1PC
57	192-1572n5551	Transistor FSC 2N5551 TAP	Q103,109	2PCS
58	192-1582n5401	Transistor FSC 2N5401 AI-PNP	Q104,110	2PCS
59	197-031n4148	Diode 100mA 75V SIGNAL	D101,103,105,108,11	19PCS
60	199-15000335	Diode 3.3V 1/2W 52mm TAP	D102,205	2PCS
61	199-15000625	Diode 6.2V 1/2W 52mm TAP	D106,107	2PCS
62	199-15001605	Diode 6V 1/2W 52mm TAP	D109	1PC

Model name: 051-A00014B PCB ASS'Y OF SCS135 LIMITER

No.	Part number	Description	Referance	Q'ty
01	052-A00014B	AI ASS'Y OF LIMITER		1PC
02	162-50129001	CABLE ASS'Y 120mm AWG28WHT		1PC
03	175-9f40hr2	Connector 40PIN PITCH=2.54mmHR2*40		0.15PC
04	190-16tl074cn	I.C TL074CN ST	U301,FS101	1PC
05	162-10059001	Wire 50mm WHITE UL1007 AWG266:6	SW101	1PC

Model name: 052-A00014B AI ASS'Y OF LIMITER

No.	Part number	Description	Referance	Q'ty
02	110-16103j26	Resistor 10K 1/6W ±5% CF 26mm TAP	R301,R303,R304,R30	6PCS
03	110-16223j26	Resistor 22K 1/6W ±5% CF 26mmTAP	R310,312	2PCS
04	110-16333j26	Resistor 33K 1/6W ±5% CF 26mmTAP	R305	1PC
05	110-16474j26	Resistor 470K 1/6W ±5% CF 26mmTAP	R307	1PC
06	110-16751j26	Resistor 750Ω 1/6W ±5% CF 26mmTAP	R311,313	2PCS
07	110-16755j26	Resistor 7.5M 1/6W ±5% CF 26mmTAP	R306	1PC
08	130-3f104z503	Capacitor 0.1U 50V +80/-20% TAP	C305,306	2PCS
09	132-103j503	Capacitor 0.01U 50V ±5% TAP	C302,303	2PCS
10	135-3226m50	Capacitor22U 50V ±20% TAP	C301	1PC
11	135-3476m25	Capacitor 47U 25V ±20% TAP	C304	1PC
12	192-027c1815gr	Transistor 2SC1815GR TAP	Q301,302	2PCS
13	197-031n4148	Diode 100mA 75V SIGNAL	D301,302	2PCS
15	110-16153j26	Resistor 15K 1/6W ±5% CF 26mm TAP	R302	1PC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MODEL NO.TSS-450 SUB/230
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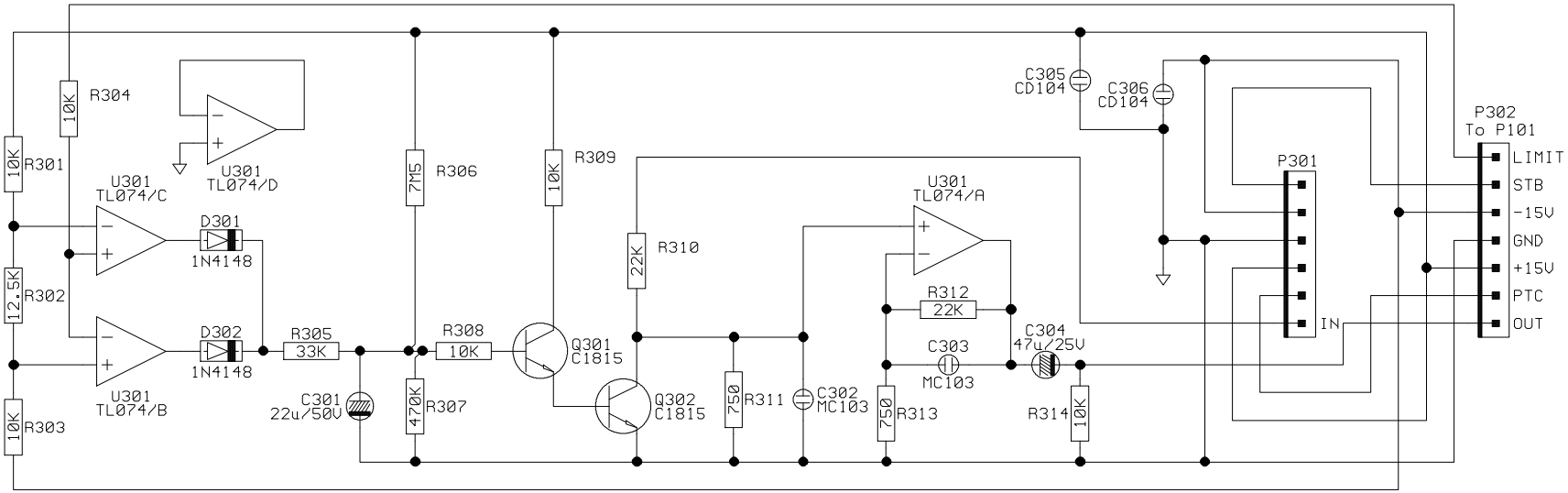
DATE :2003-07-02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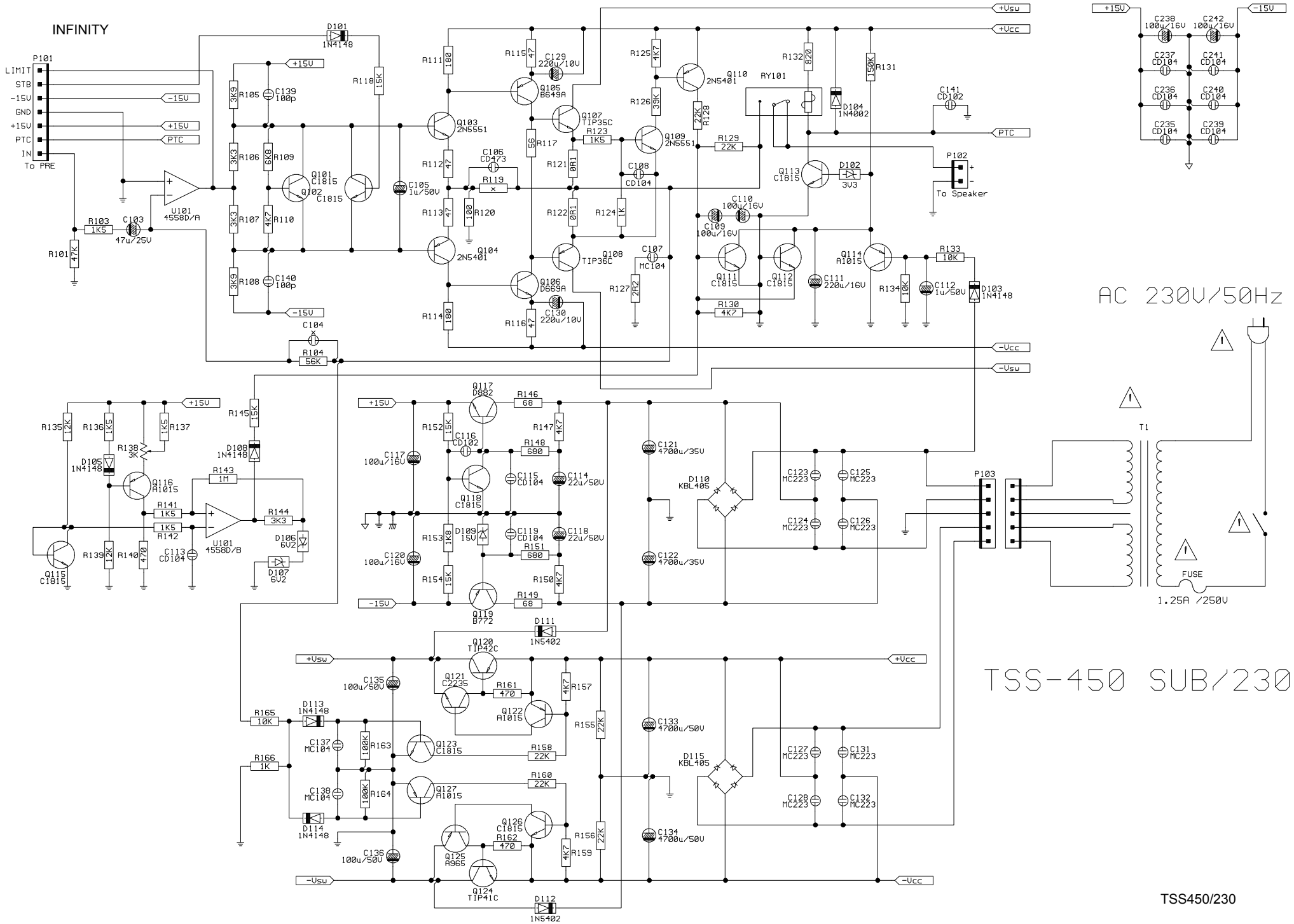
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PTC
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Q112 C1815
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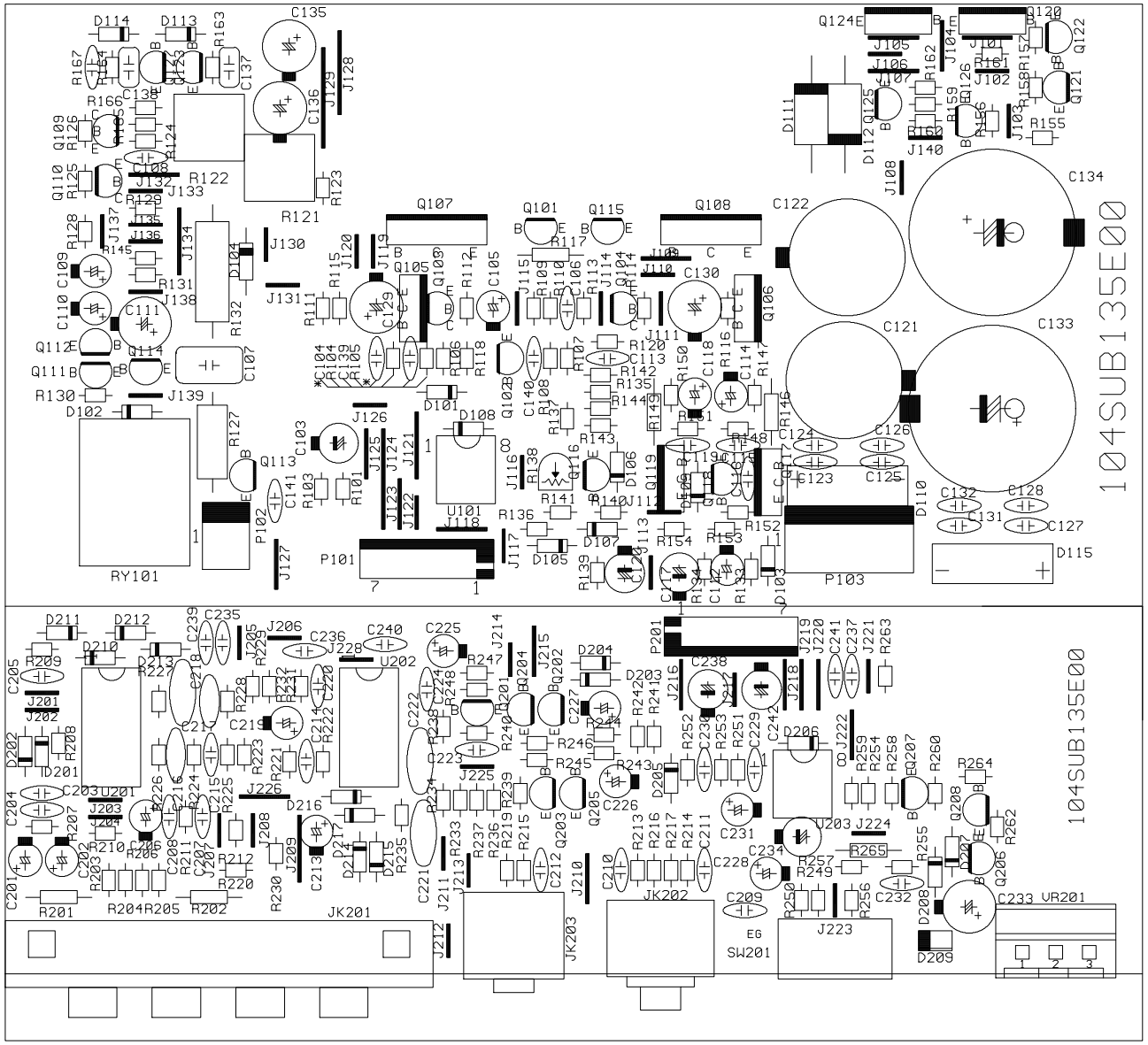
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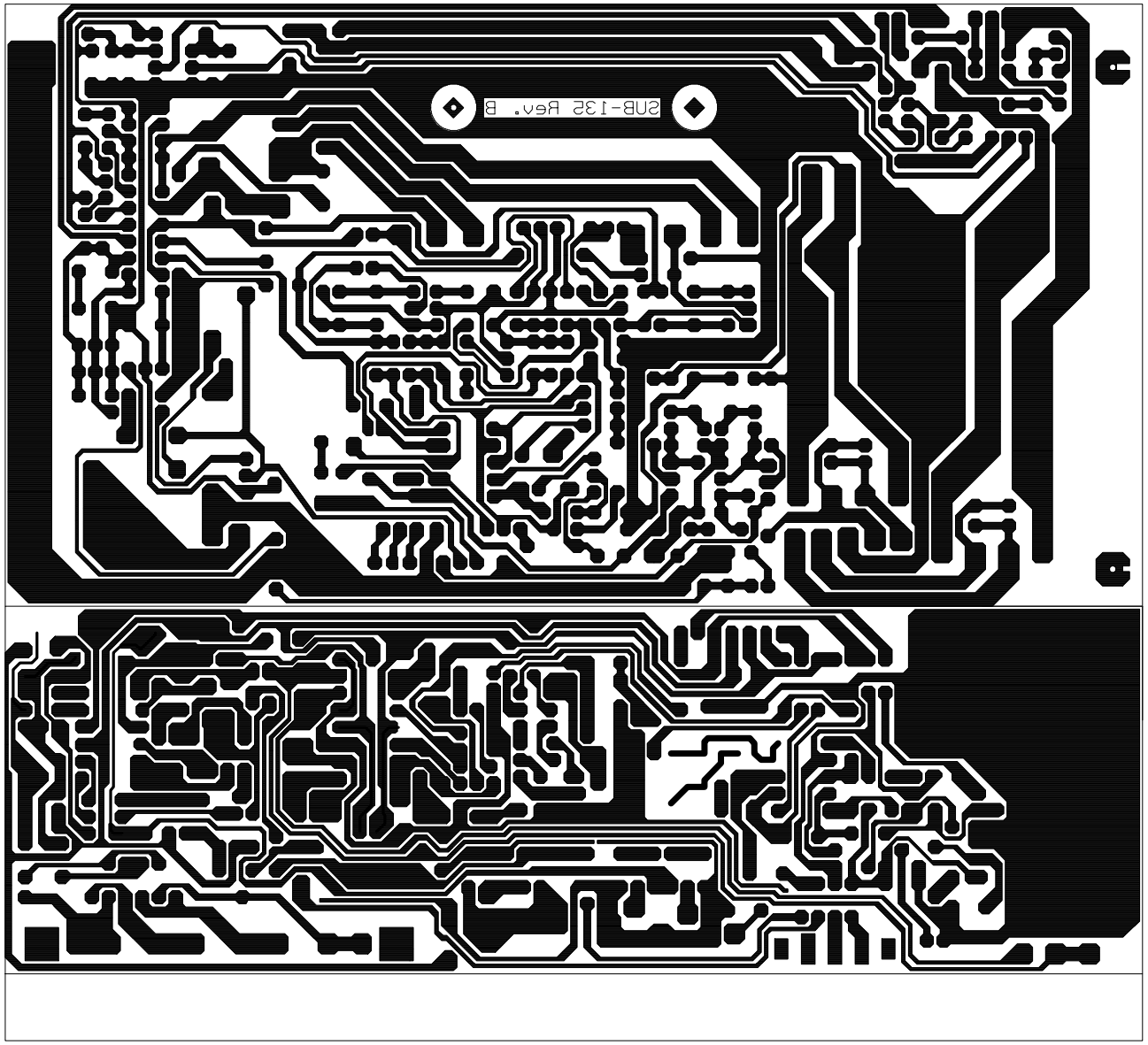
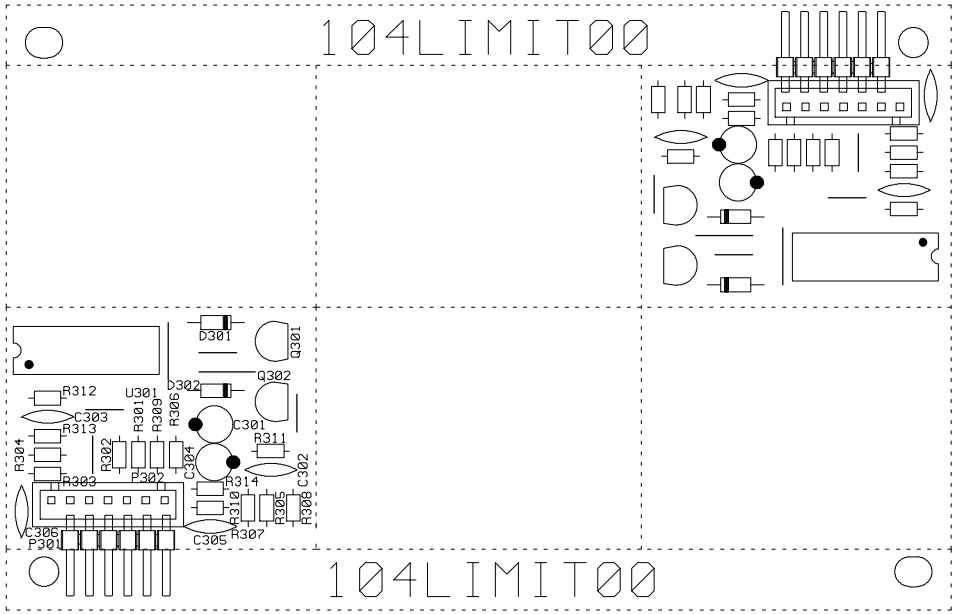

SUB-135 Rev. B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